

**FACT SHEET FOR STATE WASTE DISCHARGE
PERMIT NO. ST-9147**

**TREE TOP, INC.
PROSSER FACILITY**

SUMMARY

Tree Top, Incorporated (Tree Top) is seeking reissuance of the State Waste Discharge Permit for its Prosser fruit processing facility. This facility produces juices and concentrates from fresh apples, grapes and other fruits. This permit will regulate discharges to the company's land treatment system and to the City of Prosser's Publicly-Owned Treatment Works (POTW).

The company operates an onsite wastewater treatment facility consisting of screening, a two-cell aerated lagoon system, and a land treatment sprayfield. This facility has been covered by temporary permits issued to its previous owner, the Seneca Foods Corporation (Seneca), since 1990. Discharges to the sprayfield are regulated through sprayfield loadings established in Attachment C of the Department-approved Operation and Maintenance (O&M) Manual. The company operates a network of ground water monitoring wells in the sprayfield to verify compliance with the State's Ground Water Quality Standards.

With the recent extension of the City of Prosser's sanitary collection system to the Prosser Industrial Park, Tree Top has concluded an agreement with the City for some treatment capacity. Tree Top plans to utilize this capacity during high production months to avoid overloading the sprayfield. This permit requires the contract limits negotiated with the City to be inserted into Attachment C and be incorporated into the permit by reference.

This permit requires compliance with the sprayfield loading limits contained in Attachment C of the most recent O&M Manual. Similarly, this permit requires Tree Top to conduct the monitoring program detailed in Attachment B for the monitoring of soil, crops, surface water and ground water. The monitoring program for influent into, and effluent out of, the treatment lagoons has been revised in this permit and is specified in Special Condition S2.A. To address shortcomings in the current monitoring program, Special Condition S2.I. requires submittal of a Quality Assurance Project Plan early in the permit cycle.

In addition, this permit requires Tree Top to submit a new Engineering Report, to correct non-compliance with the State's Ground Water Quality Standards. Finally, a new O&M Manual is required near the end of the permit cycle.

In addition to State Waste Discharge Permit No. ST-9147, this facility was covered by National Pollutant Discharge Elimination System (NPDES) Permit No. WA-002136-9 for a cooling water discharge to the Yakima River. After Tree Top ceased its discharge to the river on December 6, 2001, the NPDES Permit became unnecessary and was terminated.

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INTRODUCTION

This fact sheet is a companion document to the State Waste Discharge Permit No. ST-9147. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the State is allowed. Regulations adopted by the State include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Tree Top, Inc.
Facility Name and Address	Tree Top-Prosser Facility 2780 Lee Road Prosser, WA 99350
Type of Facility	SIC Codes 2033 and 2037 Fruit Processing
Treatment Processes	Outfall #001: Screening, facultative lagoons and land treatment Outfall #002: Screening and discharge to the City of Prosser POTW
Legal Description of Land Treatment Area (Outfall #001)	NW¼ of Section 31, Township 9N, Range 25 E. W. M.
Discharge Location to City of Prosser POTW (Outfall #002)	Latitude: 46° 13' 06" N Longitude: 119° 44' 33" W

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

The Tree Top Prosser facility is comprised of the production facility and the land treatment system. The production facility is located within the Prosser Industrial Park, approximately 2 miles east of the City of Prosser and south of the Yakima River. The screening process of the wastewater treatment system is also located at the production site.

The land treatment system is located on the north side of the river, approximately one-half mile northwest of the production facility. The land treatment site occupies a total of approximately 140 acres and consists of a 95 acre sprayfield, treatment lagoons and ancillary structures. Wastewater is pumped from the production facility to the land treatment site through a transmission line that passes over the Yakima River and Chandler Canal.

The Tree Top Prosser facility typically operates 24 hours a day, 5 days a week, 52 weeks a year, except during the main processing season (September - December), when it operates 7 days a week. The facility typically processes more than 100,000 tons of fresh fruit per year.

Until the writing of this fact sheet, there has not been a comprehensive record made of the land treatment system of this facility since it was proposed in 1990. In an effort to compile such a documentary record, this fact sheet contains a summary of the salient events concerning the treatment system that have occurred over the last 13 years. Many of the events described in this narrative occurred during Seneca's ownership of the facility; however, they are relevant to the present condition of the sprayfield and are included in this fact sheet to provide historical context.

to the reader. It is worth noting that some improvement in ground water quality has occurred in recent years, since Tree Top has assumed ownership of the facility. The Department looks forward to working with the company to seek further improvements in the efficacy of the land treatment system.

History

This fruit processing facility has existed at the Prosser Industrial Park since the park was developed in the early 1960s by the Port of Benton. This facility was owned by the Seneca Foods Corporation until February 1999, when Tree Top assumed ownership.

Industrial Processes

This facility is primarily an apple and grape processor. These two commodities are processed into juice, concentrate, and applesauce. Other fruits are processed into concentrates in smaller quantities. Products are packaged for both industrial and retail sales and are stored in an onsite warehouse until shipment.

Treatment Processes

Tree Top's wastewater treatment system consists of solids screening at the production facility on the south side of the river, the lagoon system and sprayfield on the north side of the river, and the transmission pipe and pumps that connect the two sites.

Process wastewater is first screened to remove fruit solids and diatomaceous earth. Wastewater is then piped beneath the Yakima River, then over the Chandler Canal to the lagoon system and sprayfield site. The lagoon system consists of two cells. Wastewater first receives treatment in a 10 million gallon treatment/storage cell lined with high-density polyethylene membrane and equipped with four surface aerators. Wastewater then enters a 35 million gallon mechanically-aerated facultative cell lined with high-density polyethylene membrane and equipped with three surface aerators.

Sprayfield

Following treatment in the lagoons, wastewater is land applied to the 95 acre sprayfield through a wheel-line irrigation system.

SOILS, GEOLOGY AND GROUND WATER

The soils at the land application site have been classified by the U. S. Soil Conservation Service (now the Natural Resources Conservation Service) as Scooteney series. Scooteney soils are well-drained, medium-textured and underlain by a large gravelly loam. These soils are

considered to be well suited for land application of process wastewater of the type generated by food processors.

The unconfined (uppermost) aquifer at the land application site occurs in the alluvium consisting mainly of bouldery and cobbly silty gravel. The thickness of this alluvium ranges from zero, at the southern end of the site where the basaltic bedrock is exposed, to more than 50 feet in the central and northwest portion of the site.

The chemistry of ground water flowing through this area is typical of basaltic aquifers. Bicarbonate water dominates with calcium and sodium as the principle cations, with both being present in approximately equal amounts. Ground water in the shallow aquifer moves to the southeast toward the Yakima River.

More details about the soils, geology and ground water at the land application site can be found in Chapter 3 of the 1990 Engineering Report.

PERMIT STATUS

Two State Waste Discharge Permit applications were submitted to the Department in support of this permit. The first was for Tree Top's discharge to the land treatment system and the second was for the company's discharge to the City of Prosser POTW.

The permit application for the discharge to the land treatment system was submitted to the Department on June 3, 2002 and accepted by the Department on June 4, 2002.

Due to a lack of resources, the Department issued a temporary State Waste Discharge Permit for this facility on July 12, 2002.

The permit application for the discharge to the City of Prosser's collection system was accepted by the Department on August 3, 2003.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

A compliance inspection without sampling was conducted on July 23, 2003.

In a letter dated April 13, 1995, Seneca's engineering consultants proposed to conduct a Land Application Performance Study to determine the adequacy of the sprayfield to provide wastewater treatment and meet permit limits. The study was a response to the Department's concerns of increasing nitrate concentrations found in the sprayfield monitoring wells. The company proposed to complete the study within approximately 60 days of the Department's approval of the scope of work. In January 1996, in response to numerous exceedances of the sprayfield loading limits, escalating nitrate concentrations present in ground water samples and

the non-submittal of the promised Land Application Performance Study, the Department issued a Notice of Violation (NOV) DE 96WQ-C112 to Seneca Foods.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit applications and in discharge monitoring reports (DMRs).

Screened Wastewater

Table 1 contains a characterization of wastewater that has been screened, but prior to biological treatment in the lagoon system. These data were included in the permit application and characterizes influent to the lagoon from January 1996 through July 2001.

Table 1: Screened Wastewater Characterization

Parameter	Measured Concentrations		
	Minimum	Maximum	Average
5-Day Biological Oxygen Demand (BOD ₅), in mg/L	270	9,800	2,700
Total Suspended Solids (TSS), in mg/L	20	2,200	500
Total Kjeldahl Nitrogen (TKN), in mg/L	1	100	17

Sprayfield Loadings

A summary of hydraulic and organic loadings to the sprayfield is presented in Table 2. Monthly data were averaged separately for the period during which Seneca owned the facility (prior to February 1999) and Tree Top's subsequent ownership. Averages reflect loadings during months in which wastewater was applied to the sprayfield; data for months in which wastewater was not land applied were removed from the data set. Beginning in 1996, wastewater has not been applied to the sprayfield during the months of November, December, January and (sometimes) February. The size of the sprayfield, approximately 95 acres, has remained constant since it was established in 1991.

Table 2: Historical Sprayfield Loadings

Parameter	Units	Seneca Loadings, Average for Jan 92 thru Jan 99	Tree Top Loadings, Average for Feb 99 thru Jun 03
Wastewater Flow	gallons/month	12,161,374	10,287,283
Total BOD	mg/L	548	284
	lbs/month	50,077	23,356
Soluble BOD	mg/L	329	147
	lbs/month	29,384	12,686
TKN	mg/L	40	26
	lbs/month	4,178	2,242

The reduction in sprayfield loadings reflects Tree Top's efforts to minimize impacts to ground water and restore ground water quality to pre-sprayfield conditions.

PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable methods of prevention, control and treatment (AKART) and not pollute the waters of the State. The minimum requirements to demonstrate compliance with the AKART standard were determined in the engineering report (*Wastewater Treatment Project for Seneca Foods Corporation*, dated July 1990).

This permit also includes limitations on the quantity and quality of the wastewater applied to the sprayfield that are anticipated to protect the quality of the ground water. The approved engineering report includes specific design criteria for this facility. See GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS on the next page for further discussion on this issue.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring AKART for discharges to waters of the State (WAC 173-216-110). AKART for this facility was determined in the July 1990 Engineering Report, prepared by J-U-B Engineers, Inc. However, the permit writer could not find a Department-issued letter of approval for the Engineering Report. In any case, much has been learned over the past 13 years about the assimilative capacity of the land treatment system. Therefore, this permit requires Tree Top to submit an Engineering Report to the Department for review and approval.

Effluent limits for the land treatment system were expressed as hydraulic and nutrient mass loadings to the sprayfield, as specified in Attachment C of the Operations and Maintenance (O&M) Manual. Daily, monthly and annual limits were proposed for flow volume, nitrate-nitrogen, total kjeldahl nitrogen (TKN), total BOD and soluble BOD loadings to the sprayfield. Permitted loadings vary by month. The most current, Department-approved loadings are presented in Appendix C of this fact sheet.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In January 2002 Tree Top signed a contract with the City of Prosser for treatment capacity at the City's wastewater treatment plant. The purpose of this arrangement was to provide a treatment and disposal alternative for the company's waste loadings that would otherwise overload the land treatment system and possibly cause further exceedances of the ground water quality standards or action limits established in the 1990 Engineering Report. Tree Top's current contract loading limits with the City are presented in Appendix C of this fact sheet. In the event Tree Top and the City agree to revisions of these limits, the new limits will be incorporated into this permit by reference.

GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Ground Water Quality Standards. Drinking water is the beneficial use generally requiring the highest quality of ground water. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

Applicable ground water criteria as defined in Chapter 173-200 WAC and in RCW 90.48.520 for this discharge include the following:

Table 3: Ground Water Quality Criteria

Parameter	Criterion
Total Coliform Bacteria	1 Colony/ 100 mL
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/L
Nitrate	10 mg/L
pH	6.5 to 8.5 standard units
Manganese	0.05 mg/L
Total Iron	0.3 mg/L
Toxics	No toxics in toxic amounts

Prior of operation of the sprayfield in November 1991, four ground water quality monitoring wells were installed in the shallow aquifer and 12 months of baseline water quality data were obtained beginning in December 1990. Three additional shallow aquifer monitoring wells were installed in May 1991 and two other wells were completed in a lower aquifer. The last monitoring well was placed along the upgradient margin of the sprayfield in April 1997. Subsequently, one well in the shallow aquifer was abandoned due to lack of water. Ground water quality data were obtained monthly from all wells until August 2002, when the two deep wells changed to a quarterly monitoring schedule. Water quality data have been collected from several domestic wells located at homes adjacent to the land treatment site as well as from two springs and associated wetlands that occur downgradient from the site. All domestic wells are completed in the deep aquifer.

A cutoff drain was installed along the upgradient margin of the sprayfield prior to operation. The purpose of this drain was to intercept and route ground water around the site to avoid mounding that was predicted to occur within the sprayfield due to the wastewater discharges. The cutoff drain was also intended to function as the source of upgradient water quality data in the shallow aquifer instead of drilling an upgradient monitoring well. For the deep wells, the northern well was considered upgradient and the southern well was intended to measure downgradient water quality.

The following table is a characterization of the average of certain ground water quality parameters at the land treatment site. Pre-operational water quality data (December 1990 through October 1991) are presented for comparison with operational data (November 1991 through May 2003). For most wells, the pre-operational data in the tables is based on from 5 to 13 samples and the operational data are based on about 140 samples.

Table 3: Ground Water Characterization, Shallow Aquifer

Parameter		Units	MW1	MW2	MW3	MW4	MW6	MW7	MW10	Cutoff
NO ₃ -N	Pre-op	mg/L	0.64	0.72	0.51	0.60	1.16	0.77	None	0.19
	Op	mg/L	2.72	1.76	5.62	4.34	2.23	6.87	0.64	1.41
Total Dissolved Solids	Pre-op	mg/L	397	389	523	410	449	517	None	346
	Op	mg/L	526	505	657	623	534	690	578	440
pH	Pre-op	mg/L	7.10	7.12	7.18	7.12	7.16	7.09	None	7.14
	Op	mg/L	7.26	7.27	7.27	7.23	7.26	7.26	7.38	7.50

Table 4: Ground Water Characterization, Deep Aquifer

Parameter		Units	DMW-1	DMW-2
NO ₃ -N	Pre-op	mg/L	2.85	2.86
	Operational	mg/L	2.72	2.77
Total Dissolved Solids	Pre-op	mg/L	352	377
	Operational	mg/L	342	390
pH	Pre-op	mg/L	7.44	7.43
	Operational	mg/L	7.67	7.55

Table 5: Surface Water Characterization, Springs and Wetlands

Parameter		Units	West Spring	West Wetland	East Spring	East Wetland
NO ₃ -N	Pre-op	mg/L	0.09	0.09	0.58	0.24
	Operational	mg/L	0.44	0.43	3.96	3.78
Total Dissolved Solids	Pre-op	mg/L	356	394	400	360
	Operational	mg/L	542	466	608	642
pH	Pre-op	mg/L	7.35	7.63	7.07	7.52
	Operational	mg/L	7.80	7.89	7.29	7.54

Review of the data in these tables, as well as time series plots that track the data monthly, shows that discharges to the land treatment site have impacted the shallow aquifer but not the deep aquifer. Although the facility has improved the management of the sprayfield, residual impacts are still reflected in the monthly data. The engineering report submitted with the first permit application predicted that NO₃-N concentrations in the sprayfield would rise to 3 mg/L. Several shallow aquifer wells exceed that value on an average basis. Similarly, the Total Dissolved Solids (TDS) concentration was predicted to range from 740 to 800 mg/L. On average, none of the wells exceed the predicted TDS concentration, but several exceed that concentration on a monthly basis.

The deep aquifer wells do not show significant increases in NO₃-N or TDS over the same period of record. It may be concluded that the adverse impacts recorded in the shallow aquifer have not affected the deep aquifer.

The primary cause of the increased concentration of nitrate is believed to be related to application of wastewater in excess of the agronomic rate. The facility began discharging

wastewater to the sprayfield in the winter of 1991 and discharged continuously through October 1996. Application of wastewater during the winter, when crops are essentially dormant, results in untreated wastewater percolating to ground water. The facility began to carefully manage wastewater discharges in late 1996. Typically, the volume of wastewater available during the summer is inadequate to supply the needs of the crop and SVID irrigation water is used to supplement the wastewater discharges. Comparing the monthly crop water needs (as presented in the engineering report) to the actual discharges to the sprayfield reveals that during spring and early summer slight deficit application occurs, while during the late summer and early fall slight excess application occurs. No application occurs during the late fall and through the winter, typically from November through February. This distribution of water on a healthy crop appears to have mitigated some of the early effects of applying wastewater outside the growing season. However, the long term results of the improved management have not proven totally effective. In particular, TDS concentrations have begun to increase after having stabilized for a few years. The concentration of $\text{NO}_3\text{-N}$ is fairly stable, but not within predicted concentrations.

No permit limits in ground water have been set in previous permits. According to the *Implementation Guidance for the Ground Water Quality Standards* (Ecology 1996), limits may be established based on upgradient water quality data or from pre-operational water quality data in each well, if an adequate number of samples were collected. For the first permit on the site, the cutoff trench was intended to obtain upgradient water quality and data collected during the first permit cycle that would be used to calculate permit limits for inclusion in subsequent permits. Instead, the cutoff trench was found to discharge inconsistently. For example, only 4 samples have been collected since January 2001. In light of the intermittent discharge from the cutoff, the water quality characterization was viewed with suspicion and was not used as the indicator of upgradient ground water quality. Consequently, permit limits could not be established. In early 1997, a monitoring well was installed near the upgradient property boundary at a point where it was assumed that it would not be affected by the cutoff trench. However, water quality data from that well may have been affected by application of wastewater at the wellhead. Also, the well was mostly dry during 2001 and 2002. Tree Top will institute sprayfield management practices to avoid application of wastewater adjacent to the well during the next permit and the water quality data will be evaluated to determine whether the well is reliably measuring upgradient ground water quality. The other option for calculating limits in ground water uses pre-operational baseline water quality data. The *Implementation Guidance* recommends a minimum of eight measurements to achieve valid statistical basis for making the background calculation. That number of measurements is only available for four of the seven shallow aquifer wells, and neither of the deep aquifer wells.

As a result of these circumstances, permit limits will not be set in this permit. The facility will be required to determine a reliable method for monitoring background water quality and implement the necessary monitoring program. Permit limits will be calculated from those data.

The facility will also be required to submit a method for tracking monthly application of wastewater and irrigation water that will take into account the seasonal variation of crop needs,

match water quantity to the specific crop grown in the sprayfield, maximize treatment of NO₃-N, and minimize TDS impacts to ground water.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

WASTEWATER MONITORING

The monitoring schedule is detailed in this permit under Special Condition S2. and, by reference, Attachment B of the O&M Manual. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. Monitoring of discharges to the land treatment system (lagoons and sprayfield) are specified in S2.A because the current version of Attachment B required reporting of organic concentrations only, and mass loadings data would be very helpful to the Department. Furthermore, this permit requires monitoring of two additional parameters that were not considered pollutants of concern when the original monitoring program was established: Fixed Dissolved Solids (FDS) and Total Dissolved Solids (TDS). Dissolved solids have emerged as pollutants of concern in the ground water and the information is needed so that it can be considered in the ER and O&M Manual updates (in approximately 2 years).

The routine ground water monitoring program has been carried over from Attachment B to Special Condition S2.B1 of the permit because this schedule has remained essentially unchanged from the original (1991) program and the Department anticipates no need for changes in monitoring of these parameters during the next 5 years. However, in the event additional pollutants of concern emerge during the permit cycle, Special Condition S2.B2 requires Tree Top to revise Attachment B accordingly and conduct the additional monitoring as permit requirements.

Special Conditions S2.F and S3.D require Tree Top to report monitoring data for the process wastewater discharge to the City of Prosser POTW. The Department recognizes that, in accordance with Tree Top's contract with the City, the City owns the monitoring equipment and conducts the monitoring of the discharge to its collection system. Neither minimum monitoring frequencies nor samples types are specified in this permit because the Permittee does not control these aspects of the monitoring program. However, Special Condition S3.D requires Tree Top to report all monitoring results for these pollutants to the Department on its monthly DMRs. Submittal of data detailing loadings to the City will help the Department in comprehensively evaluating Tree Top's overall wastewater management program.

MONITORING OF SOILS, SPRINGS AND WETLANDS

Attachment B contains an extensive monitoring program of sprayfield soil, and nearby springs and wetlands. The Department anticipates these monitoring schedules will be revised as a byproduct of the new ER and O&M Manual, but until these documents are renewed and approved, the existing schedules are considered sufficient.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of Special Condition S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110).

FACILITY LOADING

The design criteria for this treatment facility are taken from the 1990 ER prepared by J-U-B Engineers, Inc., and are detailed in Appendix C of this fact sheet. Due to the age of the existing ER, and the fact that it was written before the land treatment system became operational, this permit requires submittal of a new ER that will incorporate the knowledge and experience gained with the land treatment system. Therefore, in accordance with WAC 173-200-080, the permit requires the Permittee to prepare and submit an Engineering Report for Departmental approval. The Engineering Report will be based on soil and hydrogeologic characteristics and be capable of assessing impacts to ground water. Pollution prevention must also be addressed in the ER. The ER will be prepared using "*Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*," Ecology 1993.

OPERATIONS AND MAINTENANCE

This permit contains Special Condition S4, as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

This permit requires Tree Top to submit a new Operation and Maintenance (O&M) Manual to the Department, for review and approval, with the next application for permit renewal.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the State from leachate of solid waste.

This permit requires, under the authority of RCW 90.48.080, that the Permittee update the Solid Waste Plan designed to prevent solid waste from causing pollution of the waters of the State and submit it to the Department. The plan must also be submitted to the local solid waste permitting agency for approval, if required by local ordinance.

SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN

The Department has determined that the Permittee stores a quantity of chemicals and products that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

This permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to State waters and for minimizing damages if such a spill occurs.

GENERAL CONDITIONS

General Conditions are based directly on State laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1. requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2. requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3. specifies conditions for modifying, suspending or terminating the permit. Condition G4. requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5. requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6. prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7. and G8. relate to permit renewal and transfer. Condition G9. requires the payment of permit fees. Condition G10. describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for five years.

REFERENCES FOR TEXT AND APPENDICES

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Washington State Department of Ecology.
Laws and Regulations(<http://www.ecy.wa.gov/laws-rules/index.html>)
Permit and Wastewater Related Information
(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

Washington State Department of Ecology, 1996. *Implementation Guidance for the Ground Water Quality Standards*, Ecology Publication # 96-02.

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APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on June 12, 2002 in the Prosser Record to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on December 3, 2003 in the Prosser Record Bulletin to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Washington State Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This fact sheet and the associated permit were written by Jim La Spina.

APPENDIX B -- GLOSSARY

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the Federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the eighty (85) percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-

composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring --Uninterrupted, unless otherwise noted in the permit.

Distribution Uniformity--The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of thirty (30) semester hours or forty-five (45) quarter hours professional core courses in agronomy, crops or soils, and have five (5), three (3), or one (1) year(s), respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

**APPENDIX C -- PERMITTED LOADINGS TO THE LAND TREATMENT SYSTEM
AND THE CITY OF PROSSER POTW**

Current Permitted Loadings to the Land Treatment System

Month	Net Volume WW (gallons)	WW Applied (gallons)	Total BOD Loading (lbs)	Soluble BOD Loading (lbs)	Total Kjeldahl Nitrogen (lbs)	Nitrate-N Loading (lbs)
September	12,714,854	12,714,654	13,838	9,544	533	3,004
October	13,974,725	13,975,069	15,210	10,490	585	3,302
November	14,991,311	4,480,146	4,876	3,363	188	1,058
December	12,499,604	1,493,382	1,625	1,121	63	353
January	12,456,160	0	0	0	0	0
February	11,622,039	4,480,146	4,876	3,363	188	1,058
March	8,853,083	13,440,438	14,628	10,088	563	3,175
April	8,018,961	17,920,584	19,504	13,451	751	4,234
May	7,037,130	23,894,112	26,006	17,935	1,001	5,645
June	6,554,903	16,337,599	17,781	12,263	684	3,860
July	9,694,715	9,706,983	10,565	7,286	407	2,293
August	11,155,220	11,170,497	12,158	8,385	468	2,639
Totals	129,572,706	129,613,611	141,068	97,288	5,429	30,622

Source: Addendum To Engineering Report for Seneca Foods Corp., Prosser, WA.

Current Permitted Loadings to the City of Prosser POTW

Month	Flow, in MGD	BOD, in lbs/day	TSS, in lbs/day
September	0	0	0
October	0	0	0
November	0.150	2,190	420
December	0.150	2,190	420
January	0.150	2,190	420
February	0.150	2,190	420
March	0.150	2,190	420
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0

Contract is dated January 30, 2002.

APPENDIX D -- RESPONSE TO COMMENTS

No comments were received by the Department of Ecology.